

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
24 February 2005 (24.02.2005)

PCT

(10) International Publication Number  
**WO 2005/017254 A1**

(51) International Patent Classification<sup>7</sup>: **D21F 1/00**

BL0 9EH (GB). QUIGLEY, Scott [US/US]; 1203 Hunter Crossing, Bossier City, LA 71111 (US). BOECK, Johann [AT/AT]; Bairach 1, A-4120 Neufelden (AT).

(21) International Application Number:  
PCT/EP2004/051794

(22) International Filing Date: 13 August 2004 (13.08.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
60/494,875 13 August 2003 (13.08.2003) US

(71) Applicant (for all designated States except US): VOITH  
FABRICS PATENT GMBH [DE/DE]; St. Poeltener  
Strasse 43, 89522 Heidenheim (DE).

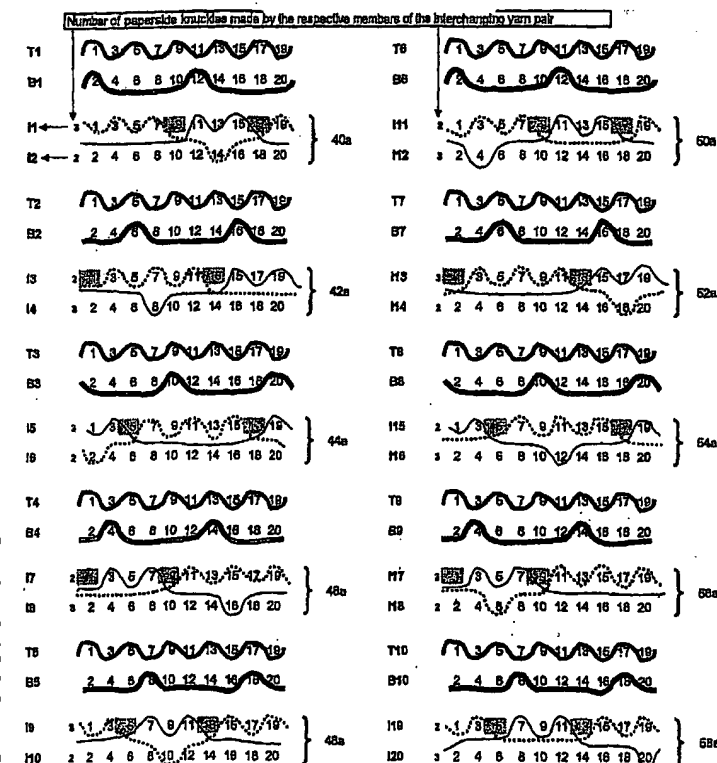
(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,

[Continued on next page]

(72) Inventors; and  
(75) Inventors/Applicants (for US only): HAY, Stewart Lister [GB/GB]; 12 Heapworth Avenue, Ramsbottom, Bury

(54) Title: FABRICS EMPLOYING BINDER/TOP INTERCHANGING YARN PAIRS



(57) Abstract: Multi-layer forming fabric having a paper side warp layer (1, 3, 5,...) and a machine side warp layer (2, 4, 6,...), the fabric comprising at least one set of paper side wefts (Tx), at least one set of machine side wefts (Bx) and at least one pair of interchanging weft yarns (11, 12, 13, 14,...), the members of each interchanging weft pair together forming one continuous weft path on the paper side wherein all of said interchanging weft pair members interweaving with at least one paper side warp and in at least one interchanging weft pair one of the members (binder member) interweaving with at least one machine side warp and with at least one paper side warp yarn and the other member (top member) interweaving only with at least one paper side warp yarn.

WO 2005/017254 A1



FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

**Declaration under Rule 4.17:**

— of inventorship (Rule 4.17(iv)) for US only

**Published:**

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.